

**Abstract**

Despite intensive research and numerous essays and reports, chemical and physical methods of producing fullerene structures of carbon modifications could heretofore only be carried out on a laboratory scale.

The invention suggest a new family of nanomaterials, more specifically of carbon hybrids, namely nanostructured carbon fullerenes (NCF). Methods of production and methods of use thereof are being proposed and illustrated using numerous examples.

The proposed NCF and their nanocompounds are very well suited for industrial production and in particular in highly technological applications.